

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of

Application of Panasonic Avionics Corporation to Modify its Earth Stations Aboard Aircraft (“ESAA”) Blanket License	)	Call Sign E100089
	)	
	)	File No. _____
	)	

**APPLICATION TO MODIFY ESAA BLANKET LICENSE**

By this application, Panasonic Avionics Corporation (“Panasonic”) seeks modification of its existing earth stations aboard aircraft (“ESAA”) blanket license, Call Sign E100089, by adding new satellite points of communication for its previously authorized Single-Panel Antenna (“SPA”) and Panasonic Phased Array (“PPA”) terminals, which operate onboard U.S.-registered aircraft and onboard foreign-registered aircraft while present in U.S. and foreign airspace.<sup>1</sup> Panasonic also requests removal of certain satellite points of communication from its *ESAA Blanket License* and seeks to revise specific emission designators associated with its ESAA terminal operations.

Panasonic seeks to modify its *ESAA Blanket License* by adding two new satellites (AsiaSat-7 and IS-33E) as authorized points of communication for the SPA and PPA terminals. Panasonic also seeks to add the Galaxy 16 satellite – which is currently an authorized point of communication for the PPA terminal – as a point of communication for the SPA terminal.

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<sup>1</sup> See Panasonic Avionics Corporation, Radio Station Authorization, Call Sign E100089, File No. SES-MFS-20160819-00730 and other associated file numbers (“*ESAA Blanket License*”); *Panasonic Avionics Corporation Application for Authority to Operate Up to 50 Technically Identical Aeronautical Mobile-Satellite Service Aircraft Earth Stations in the 14.0-14.4 GHz and 11.7-12.2 GHz Frequency Bands, Order and Authorization*, DA 11-1480 (rel. Aug. 31, 2011) (“*Panasonic Order*”).

Panasonic requests authorization to add these satellites in order to extend the coverage and increase the capacity of the global eXConnect network.

Pursuant to Section 25.117(c) of the Commission's Rules, 47 C.F.R. § 25.117(c), Panasonic provides information that is changing as a result of the requested modification, including a description of the new satellite points of communication, FCC Form 312 and Schedule B and additional technical information in the Technical Appendix. Panasonic certifies that the remaining information in support of its *ESAA Blanket License* has not changed. The proposed operations are consistent with the coordinated parameters of the proposed satellites and the Commission's rules and policies governing Ku-band ESAs.<sup>2</sup> For the reasons described herein, grant of the proposed modification would serve the public interest.

## **I. BACKGROUND**

Panasonic's *ESAA Blanket License* was the subject of a recent authorization to add satellite points of communication for its previously licensed PPA terminal and add the SPA terminal for long-term commercial operations.<sup>3</sup> Both the PPA and SPA ESAA terminals are fully certified for operation on the subject commercial aircraft and operate in accordance with the terms of the *Panasonic Order*, the *ESAA Blanket License*, and Section 25.227 of the Commission's Rules, 47 C.F.R. § 25.227, governing ESAA operations.

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<sup>2</sup> See 47 C.F.R. § 25.227; see also *Revisions to Parts 2 and 25 of the Commission's Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and 14.0-14.5 GHz Frequency Bands; Service Rules and Procedures to Govern the Use of Aeronautical Mobile Satellite Service Earth Stations in Frequency Bands Allocated to the Fixed Satellite Service*, IB Docket Nos. 12-376 & 05-20, Notice of Proposed Rulemaking and Report and Order, FCC 12- 161 (rel. Dec. 28, 2012) ("*ESAA Order*").

<sup>3</sup> See Panasonic Avionics Corporation, File No. SES-MFS-20160819-00730 (Call Sign E100089) (granted on Oct. 19, 2016).

Panasonic has fully described the eXConnect System in prior submissions and hereby incorporates by reference the technical showing regarding the control functionality and other operational characteristics submitted in connection with prior applications.<sup>4</sup> Furthermore, Panasonic certifies that operations with the new satellite points of communication will be consistent with the terms, conditions and operational parameters that are currently authorized under Panasonic's *ESAA Blanket License*.

## **II. DISCUSSION**

Panasonic seeks to modify its ESAA blanket license to add two new satellites (AsiaSat-7 and IS-33E) as authorized points of communication for the PPA and SPA terminals and one satellite (Galaxy 16) as an authorized satellite point of communication for the SPA terminal only. Panasonic requests authorization to add these satellites in order to extend the coverage and increase the capacity of the global eXConnect network.

### **1. Additional Satellite Points of Communication**

The following table provides an overview of the basic parameters of the proposed operations with each new satellite point of communication:<sup>5</sup>

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<sup>4</sup> See, e.g., Panasonic Avionics Corporation, File No. SES-LIC-20100805-00992 (granted August 31, 2011) (Call Sign E100089) and subsequent amendment and modification applications.

<sup>5</sup> The SPA and PPA terminals will operate in the uplink direction within the 14.0-14.5 GHz band and consistent with its coordination agreements with co-frequency users, the Commission's Rules and applicable international requirements.

**Table 1. Proposed Satellite Points of Communication**

Satellite	Licensing Admin. <sup>6</sup>	Orbital Location	Downlink Freq. (GHz)	ITU Satellite Network	ITU Region	Service To U.S. <sup>7</sup>
AsiaSat 7	China	105.5° E	12.25-12.75	ASIASAT-CKX	3	No
Galaxy 16	U.S.	99° W	11.7-12.2	USASAT-24J	2	Yes
IS-33E	U.S.	60° E	10.95-11.2; 11.45-12.2; 12.5-12.6	INTELSAT9-60E	1, 3	No

Each of these proposed satellites have been previously authorized as points of communication for similar ESAA operations<sup>8</sup> or is a U.S.-licensed satellite.<sup>9</sup> Accordingly, the technical and operational parameters of each satellite are well known to the Commission, including each satellite’s orbital debris mitigation and end-of-life plans, and no new showing regarding these issues is required. In the attached Technical Appendix and Form 312 Schedule

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<sup>6</sup> Each licensing administration is a member of the World Trade Organization for services covered under the World Trade Organization Basic Telecommunications Agreement. *See* FCC Form 312 at Item 42; 47 CFR § 25.137(a). To the extent the Commission has not already granted authority to access any of the proposed satellite points of communication, there is a presumption in favor of such access under the Commission’s *DISCO II* policies. (*See* Amendment of the Commission’s Regulatory Policies to Allow Non-U.S.-Licensed Space Stations to Provide Domestic and International Satellite Service in the United States, *Report and Order*, 12 FCC Rcd 24094, ¶ 25 (1997) (“*DISCO II Order*”).

<sup>7</sup> “Yes” indicates that the relevant satellite will be used for ESAA operations in U.S. territory. “No” indicates that ESAA operations will be conducted outside U.S. territory, even if the satellite may have some coverage of the United States.

<sup>8</sup> *See, e.g.*, Gogo LLC, File No. SES-MFS-20151022-00735 (Call Sign E120106) (granted authority to add AsiaSat-7 as authorized points of communication under its ESAA blanket license).

<sup>9</sup> Galaxy 16 is a U.S.-licensed satellite and currently an authorized point of communication for the PPA terminal. IS-33E is a U.S.-licensed satellite that was recently authorized by the Commission (*see* Intelsat License LLC, File No. SAT-LOA-20150327-00016 (Call Sign S2939) (granted on Feb. 25, 2016)).

B, Panasonic provides information regarding the operational characteristics of the ESAA terminals with each satellite identified in Table 1.

Panasonic has confirmed with the operators of each satellite point of communication identified above that they have reviewed the technical characteristics of Panasonic's SPA and PPA ESAA terminal operations and such operations are consistent with their coordination agreements and will not result in unacceptable interference to other satellites within +/- 6 degrees of the subject satellite point of communication. Attached hereto are letters confirming that the power levels associated with Panasonic's ESAA terminal operations with each satellite point of communication have been coordinated with operators of adjacent satellites.<sup>10</sup> In addition, when communicating with the above satellite points of communications, Panasonic will operate the ESAA terminals consistent with Section 25.227 of the Commission's Rules, 47 C.F.R. § 25.227. Accordingly, grant of this modification application will not increase the potential for interference from eXConnect System operations. Attached in the Technical Appendix, Panasonic includes depictions of the geographic areas in which its ESAA terminals will operate with each proposed satellite point of communication.<sup>11</sup>

## **2. Ground Segment**

As indicated in Table 2 below, the gateway earth stations for Panasonic's ESAA network are located in various countries around the world to provide global coverage and vary by satellite.

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<sup>10</sup> See Technical Appendix, I.

<sup>11</sup> See Technical Appendix, I.; see also 47 C.F.R. § 25.227(b)(4).

**Table 2. Gateway Earth Stations Table**

Satellite	Satellite Operator	Gateway Earth Station Location	Country	Gateway Operator	FCC Call Sign
AsiaSat-7	AsiaSat	Beijing	China	China Telecom Satellite	N/A
Galaxy 16	Intelsat	Brewster, WA	U.S.	U.S. Electrodynamic	E120043
IS-33E	Intelsat	Cologne	Germany	Stellar	N/A
IS-33E <sup>12</sup>	Intelsat	Moscow	Russia	Gazprom	N/A

Network control and monitoring of the earth stations and the eXConnect System will continue to be provided by a Panasonic Mission Control Center (“MCC”) in Lake Forest, California on a 24/7 basis. The MCC makes use of the iDirect’s Network Management System (NMS) to provide complete control and visibility to all components the eXConnect network. The NMS system has the capability of shutting down any component in the system that is malfunctioning. The primary points of contact at Panasonic’s MCC facility has been previously provided to the Commission by Panasonic.<sup>13</sup>

### **3. Revisions to ESAA Blanket License**

In this application, Panasonic also seeks the removal of certain currently authorized satellite points of communication from its *ESAA Blanket License*. Specifically, Panasonics seeks

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<sup>12</sup> Effective November 2017, the gateway earth station in Moscow, Russia will no longer support IS-33E satellite operations. Panasonic includes representative link budgets for IS-33E with both gateway earth station locations.

<sup>13</sup> See Panasonic Avionics Corporation, File No. SES-MFS-20160819-00730 (Call Sign E100089), Technical Appendix.

to remove the following PPA satellite points of communications from its license: Anik-F1, Amazonas-2, Galaxy 17 and SES-6. Due to changes in Panasonic's satellite network configuration, these satellites no longer support the PPA terminal nor are part of the eXConnect network. Accordingly, Panasonic respectfully requests the removal of the four satellites from the *ESAA Blanket License* as authorized points of communication for the PPA terminal in order to accurately reflect its existing ESAA operations.

Additionally, Panasonic seeks to revise certain emission designators associated with various frequency bands authorized for the MELCO, PPA and SPA ESAA terminals. Specifically, Panasonic inadvertently included an extra character ("K") in several emission designators. Panasonic has provided an updated emission designator exhibit in the Technical Appendix which accurately reflects its ESAA terminal operations under its *ESAA Blanket License*. In addition, the FCC Form 312 and Schedule B associated with this application reflects the correct emissions designators.

#### **4. Public Interest Statement**

Grant of the requested modification to add the proposed additional satellites as authorized points of communication for the previously licensed ESAA terminals will serve the public interest by extending the coverage and increasing the capacity of Panasonic's global network for U.S. airlines and their passengers. This will provide a direct benefit to U.S. consumers that will be able to access new in-flight mobile broadband applications and will further enhance U.S. leadership in in-flight mobile broadband services. The additional satellites will provide added bandwidth for the eXConnect System and ensure that Panasonic has sufficient bandwidth to meet increasing demand and enhance the in-flight user experience within the relevant service area of the satellite. Moreover, removal of the identified satellite points of communication and updating

the emissions designators in the *ESAA Blanket License* will ensure that Panasonic's authorization accurately reflects its global ESAA operations.

### **III. CONCLUSION**

Based on the foregoing, Panasonic respectfully requests that the Commission modify its *ESAA Blanket License*, Call Sign E100089, by adding new satellites as points of communications for its previously authorized PPA and SPA terminals, removing certain authorized points of communication for the PPA terminal and updating the emission designators for the MELCO, PPA and SPA terminals.